

Astrometric Observations of Comets and Minor Planets

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Strategy

Comets and planet crossing asteroids are observed so that accurate positions can be determined. The observations are made with the Palomar 1.5m telescope equipped with a CCD array. This combination of telescope and detector is quite efficient at recording faint comets and minor planets. This proves quite useful for early acquisition of comets and asteroids returning for a new opposition. The resulting positions permit accurate orbits to be determined and allow the properties of the comets and asteroids to be measured by other observers using a variety of techniques. Recoveries and other notable observations of comets and planet crossing asteroids observed during the past year are discussed below.

Progress and Accomplishments

Of the comets observed during the past year, two were recoveries of periodic comets. The first recovery, P/Honda-Mrkos-Pajdusakova (1990f), was shared with another observatory. The second recovery was P/Johnson (1990h). The periodic comet P/Arend-Rigaux (1984 XXI) and other comets were also observed.

Projected Accomplishments

Asteroids which can come close to the earth (Apollos) are another high priority target. The Apollo 1988 EG was recovered at its second opposition. For the Apollos 4486=1987 SB and 4581=1989 FC observations at the second opposition were shared with another observatory. Both were permanently numbered as a consequence of the observations. 1989 FC is the small asteroid which passed very close to the earth in the spring of 1989. A fourth Apollo 4450=1987 SY was permanently numbered as a consequence of recovery and observations at both second and third oppositions.